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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,801	08/20/2003	Joseph S. Stam	AUTO 222	9297
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BRIAN J. REES GENTEX CORPORATION 600 NORTH CENTENNIAL STREET ZEELAND, MI 49464			KIM, CHONG R	
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			2623	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/645,801	STAM ET AL.
Examiner	Art Unit	
Charles Kim	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 23 August 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-64 is/are pending in the application.
4a) Of the above claim(s) 54-63 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-37, 39, 40, 42-53 and 64 is/are rejected.

7) Claim(s) 38 and 41 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 20 August 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/3/03, 12/15/03.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: ____.

DETAILED ACTION

Response to Election/Restriction

1. Applicant's election with traverse of group 1 (claims 1-53, 64) in the reply filed on August 23, 2004 is acknowledged. The traversal is on the ground(s) that the pending claims do not define related inventions in the meaning of MPEP 806.05(c). This is not found persuasive because the inventions are related as subcombinations disclosed as usable together in a single combination, see the criteria provided in MPEP 806.05(d). The Examiner notes that the applicant's citation of MPEP 806.05(c) is only applicable to inventions that are related as combination-subcombination. Note that the combination-subcombination relationship does not apply for the current pending claims.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

The following quotation of 37 CFR § 1.75 (d)(1) is the basis of objection:

(d)(1) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description. (See § 1.58(a)).

2. Claim 41 is objected to under 37 CFR § 1.75 (d)(1) as reciting features that are not supported by the remainder of the applicant's specification. The Examiner was unable to find an instance in the applicant's specification that provides support for the claimed features. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-12, 41-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claim 9, the phrase “the associated weights” in line 3 renders the claim indefinite because it is unclear which “weights” [weights associated with each hidden layer node (claim 7) or weights associated with each input (claim 8)]. For examination purposes the phrase “associated weights” will be interpreted as “associated weights of hidden layer node”.

Appropriate correction is required.

Referring to claim 10, the phrase “said input variables” in lines 1-2 lacks antecedent basis. For examination purposes the phrase “said input variables” will be interpreted as “input variables”. A similar rejection is applicable to claim 11. Appropriate corrections are required.

Referring to claim 10, the phrase “the group of light source characteristics” in line 2 lacks antecedent basis. It appears that the applicant intended the phrase to read “a group of light source characteristics”. Appropriate correction is required.

Referring to claim 11, the phrase “the group of controlled vehicle associated operating parameters” in lines 2-3 lacks antecedent basis. It appears that the applicant intended the phrase to read “a group of controlled vehicle associated operating parameters”. Appropriate correction is required.

Referring to claim 41, the phrase “said off state transition state” lacks antecedent basis. It appears that the applicant intended the phrase to read “said off state”. Appropriate correction is required.

Referring to claim 42, the phrase “said on state transition state” lacks antecedent basis. It appears that the applicant intended the phrase to read “said on state”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 20, 28, 36, 37, 44-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Breed et al., U.S. Patent No. 6,393,133 (“Breed”). Note that Breed incorporates by reference the article entitled “Learned Classification of Sonar Targets Using a Massively Parallel Network” by Gorman et al. (“Gorman”).

Referring to claim 20, Breed discloses an automatic vehicular exterior light control, comprising a controller configured to generate at least one exterior light control signal as a function of at least one probability function, wherein the at least one probability function comprises a plurality of variables and a substantially continuous output value indicative of a

probability [col. 16, line 66-col. 17, line 19 and col. 20, lines 12-38. Breed explains that the exterior light control signal is generated as a function of the trained pattern recognition algorithm. Note that the details of the trained pattern recognition algorithm are provided by Gorman (who is incorporated by reference by Breed). Gorman explains that the trained pattern recognition algorithm comprises a function of at least one probability function, wherein the at least one probability function comprises a plurality of variables and a substantially continuous output value indicative of a probability (pages 1135-1139). Note that Breed utilizes this trained pattern recognition system to control the vehicular exterior light sources. Accordingly, Breed discloses that the exterior light control signal is generated as a function of at least one probability function, wherein the at least one probability function comprises a plurality of variables and a substantially continuous output value indicative of a probability].

Referring to claim 28, see the rejection of at least claim 20 above.

Referring to claim 36, Breed further discloses that the weighting factors are determined experimentally by examining at least one image containing at least one known light source [Gorman, pages 1135-1139. As noted above, Breed incorporates by reference Gorman. Gorman explains that the weighting factors are determined experimentally by examining data that contains at least one known value (training set), see page 1136. Note that Gorman's system is used for analyzing sonar data, and therefore the known value (training set) comprises known sonar values. However, Breed utilizes the trained pattern recognition system to analyze images of light sources. Therefore, it appears that the known data (training set) in Breed's system would comprise at least one image containing at least one known light source].

Referring to claim 37, Breed further discloses that the weighting factors are determined by examining statistical data (Gorman, pages 1135-1136. As noted above, Breed incorporates by reference Gorman).

Referring to claim 44, Breed discloses an automatic vehicular exterior light control comprising a method for classifying detected light sources, the method comprising the steps of classifying at least one detected light source with a classification network, wherein an output of the classification network is indicative of the likelihood that the detected light source is a headlamp of an oncoming vehicle or a tail lamp of a leading vehicle (col. 16, line 66-col. 17, line 19 and col. 20, lines 12-38. Note that if the trained pattern recognition system recognizes the pattern of the headlights of an oncoming vehicle or the tail lights of a leading vehicle, then the output of the classification network would be indicative of a high likelihood that the detected light source is a headlamp of an oncoming vehicle or a tail lamp of a leading vehicle).

Referring to claim 45, Breed further discloses that the determination of the control state of at least one exterior light of the controlled vehicle is based upon the output of the classification network (col. 20, lines 12-38).

Referring to claim 46, Breed further discloses that the network comprises a neural network (col. 20, lines 16-18).

Referring to claim 47, Breed discloses an automatic vehicular exterior light control comprising a method of classifying detected light sources, the method comprising the steps of classifying at least one detected light source with a classification network, wherein the classification network determines the type of light source detected based upon at least one

characteristic of at least one previously classified light source verified to be accurately classified (col. 16, line 66-col. 17, line 19 and col. 20, lines 12-38).

Referring to claim 48, see the rejection of at least claim 45 above.

Referring to claim 49, see the rejection of at least claim 46 above.

Referring to claim 50, Breed discloses an automatic vehicular exterior light control comprising a method of classifying detected light sources, the method comprising the steps of classifying at least one detected light source with a trainable classification network, wherein the classification network is trained using at least one light source classified using expert knowledge (col. 16, line 66-col. 17, line 19 and col. 20, lines 12-38).

Referring to claim 51, Breed further discloses that the expert knowledge comprises experimental data (training set) [col. 16, line 66-col. 17, line 19 and col. 20, lines 12-38].

Referring to claim 52, see the rejection of at least claim 46 above.

Referring to claim 53, see the rejection of at least claim 45 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-9, 13-15, 17-19, 24, 25, 27, 35, 39, 40, 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed et al., U.S. Patent No. 6,393,133 ("Breed"). Note that Breed

incorporates by reference the article entitled “Learned Classification of Sonar Targets Using a Massively Parallel Network” by Gorman et al. (“Gorman”).

Referring to claim 1, Breed discloses an automatic vehicular exterior light control, comprising:

a controller configured to generate at least one exterior light control signal as a function of a classification network, the controller is further configured to execute an algorithm comprising at least one transition state, wherein the classification network is trained using light sources classified using expert knowledge (col. 16, line 66-col. 17, line 19, col. 20, lines 12-38 and figure 8).

Breed further discloses that the transition state comprises a non-dimmed state to dimmed state (col. 20, lines 18-25), but does not explicitly disclose that the transition state comprises an on state to off state or an off state to on state. However, the Examiner notes that this feature would have been obvious in Breed for at least the following reasons. At the time of the invention, most (if not all) of the manufactured motor vehicles had two different exterior lighting stages: a low-beam and a high-beam. In these vehicles, the exterior lighting could have been dimmed by turning off the high-beam so that the transition state comprises an on state to off state. Accordingly, it would have been obvious to modify Breed’s transition (dimming) process so that the dimming of the lights is performed by turning off the high-beam lighting of the vehicle, thereby resulting in an on state to off state transition. The suggestion/motivation for doing so would have been to reduce the risk of temporarily blinding on-coming vehicles or other vehicles traveling in front of the controlled vehicle caused by the high-beam, thereby enhancing driving safety.

Referring to claim 2, Breed further discloses that the network comprises a neural network (col. 20, lines 16-18).

Referring to claim 3, Breed further discloses that the expert knowledge comprises experimental data (training set) [col. 16, line 66-col. 17, line 19 and col. 20, lines 12-38].

Referring to claim 4, Breed further discloses a controller configured to generate at least one exterior light control signal as a function of a neural network analysis (col. 16, line 66-col. 17, line 19 and col. 20, lines 12-38).

Referring to claim 5, Breed further discloses a neural network analysis that comprises a plurality of inputs and a plurality of weights, at least one of which is associated with each input (Gorman, pages 1135-1136. As noted above, Breed incorporates by reference Gorman).

Referring to claim 6, Breed further discloses at least one output that is based upon the sum of the inputs (Gorman, pages 1135-1136. As noted above, Breed incorporates by reference Gorman).

Referring to claim 7, Breed discloses that the neural network analysis further comprises at least one hidden layer node, and at least one weighting factor; wherein each hidden layer node is associated with at least one weighting factor (Gorman, pages 1135-1136. As noted above, Breed incorporates by reference Gorman).

Referring to claim 8, Breed further discloses that the value of each hidden layer node is based upon the product of at least one or more input and at least one weighting factor associated with each input (Gorman, pages 1135-1137. As noted above, Breed incorporates by reference Gorman).

Referring to claim 9 as best understood, Breed further discloses that the exterior light control signal is based upon the product of at least one hidden layer node and the associated weights with the hidden layer [col. 16, line 66-col. 17, line 19 and col. 20, lines 12-38. Breed explains that the exterior light control signal is based upon a trained pattern recognition algorithm. Note that the details of the trained pattern recognition algorithm are provided by Gorman (who is incorporated by reference by Breed). Gorman explains that the trained pattern recognition algorithm provides an output that comprises a product of at least one hidden layer node and the associated weights with the hidden layer (pages 1135-1137). Note that Breed utilizes this trained pattern recognition system to control the vehicular exterior light sources. Accordingly, Breed discloses that the exterior light control signal is based upon the product of at least one hidden layer node and the associated weights with the hidden layer].

Referring to claim 13, Breed discloses that the neural network further comprises at least one output that comprises a substantially continuous value indicative of a probability (Gorman, pages 1137-1139. As noted above, Breed incorporates by reference Gorman).

Referring to claim 14, Breed further discloses that the controller is further configured to determine whether at least one light source is either a headlight of an oncoming vehicle, a taillight of a leading vehicle or a non-vehicular light source as a function of said neural network analysis (col. 16, line 66-col. 17, line 19 and col. 20, lines 12-38).

Referring to claim 15, Breed further discloses that the determination is further a function of the brightness of the light source (col. 20, lines 12-38).

Referring to claim 17, Breed further discloses that the neural network is trained utilizing empirical data (col. 16, line 66-col. 17, line 19 and col. 20, lines 12-38).

Referring to claim 18, Breed further discloses that the empirical data is obtained by analyzing at least one image comprising known light sources (col. 16, line 66-col. 17, line 19 and col. 20, lines 12-38).

Referring to claim 19, Breed further discloses sixty input variables (Gorman, pages 1135-1136. As noted above, Breed incorporates by reference Gorman), but does not explicitly disclose twenty three input variables. However, the Examiner notes that the number of input variables is not considered a patentable distinction because the exact number of input variables would have been chosen by the user during experimentation to meet his/her specific requirements. Therefore, it would have been obvious to modify Breed's input variables so that they comprise twenty three input variables. The suggestion/motivation for doing so would have been to enhance the flexibility of the control system by providing the capability of accepting a variety of different types/numbers of input variables.

Referring to claim 24, see the rejection of at least claim 14 above.

Referring to claim 25, see the rejection of at least claim 15 above.

Referring to claim 27, Breed does not explicitly disclose that the probability function is selected from the group comprising a first order equation, a second order equation, a third order equation and a fourth order equation. However, Official notice is taken that probability functions selected from the group comprising a first order equation, a second order equation, a third order equation and a fourth order equation were exceedingly well known in the art. Therefore, it would have been obvious to modify Breed's probability function so that it is selected from the group comprising a first order equation, a second order equation, a third order equation and a

fourth order equation. The suggestion/motivation for doing so would have been to enhance the flexibility of the vehicular exterior light control system.

Referring to claim 35, see the rejection of at least claim 13 above.

Referring to claim 39, see the rejection of at least claim 27 above.

Referring to claim 40, see the rejection of at least claim 1 above.

Referring to claim 42 as best understood, Breed further discloses that the on state (non-dimmed state) is entered when at least one light source (reflections off a signpost or the roadway) is detected (col. 20, lines 12-38).

6. Claims 10, 11, 16, 21, 22, 26; 29, 30, 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Breed et al., U.S. Patent No. 6,393,133 (“Breed”) and Stam et al., U.S. Patent No. 6,049,171 (“Stam”).

Referring to claim 10 as best understood, Breed does not explicitly disclose that input variables are selected from a group of light source characteristics comprising: peak brightness, total brightness, centroid location, gradient, width, height, color, x-direction motion, y-direction motion, brightness change, age, average x-direction motion, average y-direction motion, motion jitter, a change in brightness that correlates to a change in brightness of an exterior light of a controlled vehicle and average brightness change. However, this feature was exceedingly well known in the art. For example, Stam discloses input variables that comprise color and brightness change (col. 9, line 58-col. 10, line 67 and col. 15, lines 3-23).

Breed and Stam are combinable because they are both concerned with automatic vehicular exterior light control systems. At the time of the invention, it would have been obvious

to a person of ordinary skill in the art to modify the system of Breed so that it includes the input variables of Stam. The suggestion/motivation for doing so would have been to enhance the performance of the lighting control system by providing additional information that could be utilized to control the vehicular exterior lighting. Therefore, it would have been obvious to combine Breed with Stam to obtain the invention as specified in claim 10.

Referring to claim 11 as best understood, Breed does not explicitly disclose input variables that are selected from a group of controlled vehicle associated operating parameters comprising: vehicle speed, ambient light level, vehicle turn rate, lane tracking, vehicle pitch, vehicle yaw, geographic location and road type. However, this feature was exceedingly well known in the art. For example, Stam discloses input variables that comprise vehicle speed, ambient light level, and vehicle pitch (col. 7, line 26-col. 8, line 63).

Breed and Stam are combinable because they are both concerned with automatic vehicular exterior light control systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the system of Breed so that it includes the input variables of Stam. The suggestion/motivation for doing so would have been to enhance the performance of the lighting control system by providing additional information that could be utilized to control the yehicular exterior lighting. Therefore, it would have been obvious to combine Breed with Stam to obtain the invention as specified in claim 11.

Referring to claim 16, Breed does not explicitly disclose that the determination is further a function of any AC flicker that may be present in the light source. However, this feature was exceedingly well known in the art. For example, Stam discloses the determination of a type of

light source based on a function of any AC flicker that may be present in the light source (col. 11, line 66-col. 12, line 13).

Breed and Stam are combinable because they are both concerned with automatic vehicular exterior light control systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the determination step of Breed so that it is based on a function of any AC flicker that may be present in the light source, as taught by Stam. The suggestion/motivation for doing so would have been to enhance the flexibility of the light source determination process by providing the capability of detecting a variety of different types of light sources. Therefore, it would have been obvious to combine Breed with Stam to obtain the invention as specified in claim 16.

Referring to claim 21, see the rejection of at least claim 10 above.

Referring to claim 22, see the rejection of at least claim 11 above.

Referring to claim 26, see the rejection of at least claim 16 above.

Referring to claim 29, see the rejection of at least claim 21 above.

Referring to claim 30, see the rejection of at least claim 22 above.

Referring to claim 43, Breed does not explicitly disclose that at least one of the transition states comprises a series of levels and movement between levels is a function of light source brightness. However, this feature was exceedingly well known in the art. For example, Stam discloses a vehicular exterior light transition state that comprises a series of levels and movement between levels is a function of light source brightness (col. 8, line 13-col. 9, line 27).

Breed and Stam are combinable because they are both concerned with automatic vehicular exterior light control systems. At the time of the invention, it would have been obvious

to a person of ordinary skill in the art to modify the transition state of Breed so that it comprises a series of levels and movement between levels is a function of light source brightness, as taught by Stam. The suggestion/motivation for doing so would have been to enhance the flexibility of the light control system by providing multiple levels of light transition. Therefore, it would have been obvious to combine Breed with Stam to obtain the invention as specified in claim 43.

7. Claims 12, 23, 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Breed et al., U.S. Patent No. 6,393,133 ("Breed"), Stam et al., U.S. Patent No. 6,049,171 ("Stam"), and Shiraishi et al., U.S. Patent No. 5,136,507 ("Shiraishi").

Referring to claim 12, Breed and Stam do not explicitly disclose that vehicle turn rate is determined via at least one of the items selected from the group comprising: steering wheel angle, a compass, wheel speed, GPS and image analysis results. However, this feature was exceedingly well known in the art. For example, Shiraishi discloses that a vehicle turn rate is determined via steering wheel angle and wheel speed (col. 2, line 20-col. 4, line 13).

Breed, Stam, and Shiraishi are combinable because they are all concerned with vehicle control systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the control system of Breed and Stam in view of Shiraishi. The suggestion/motivation for doing so would have been to enhance the exterior lighting control process by providing accurate parameters of the vehicle's condition. Therefore, it would have been obvious to combine Breed and Stam with Shiraishi to obtain the invention as specified in claim 12.

Referring to claim 23, see the rejection of at least claim 12 above.

Referring to claim 31, see the rejection of at least claim 12 above.

Referring to claim 32, see the discussion of at least claim 24 above.

Referring to claim 33, see the discussion of at least claim 25 above.

Referring to claim 34, see the discussion of at least claim 26 above.

8. Claim 64 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Stam et al., U.S. Patent No. 6,049,171 (“Stam”) and Bechtel et al., U.S. Patent No. 4,917,477 (“Bechtel”).

Referring to claim 64, Stam discloses an automatic vehicular exterior light control, comprising a controller configured to detect a clear condition when no other lights of other vehicles are detected within a range (col. 7, line 56-col. 9, line 26), wherein automatic activation of head lamps is inhibited by an event where a threshold ambient light density is exceeded (col. 8, lines 56-63. Stam explains that when the ambient light density level is above a threshold, the activation of the low/high beam headlamps is inhibited).

Stam does not explicitly disclose that the ambient light density comprises streetlight density. However, this feature was exceedingly well known in the art. For example, Bechtel discloses that streetlights were exceedingly well known sources for providing ambient light levels (col. 3, lines 40-45).

Stam and Bechtel are combinable because they are both concerned with vehicular device control systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the ambient light of Stam so that it comprises streetlight, as taught by Bechtel. The suggestion/motivation for doing so would have been provide a flexible exterior

lighting control system that can sense a variety of different light sources. Therefore, it would have been obvious to combine Stam with Bechtel to obtain the invention as specified in claim 64.

Allowable Subject Matter

9. Claim 38 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claim 41 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 703-306-4038. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri 9:30am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ck

January 21, 2005

Jon Chang
Jon Chang
Primary Examiner